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10/539,884	06/16/2005	Takashi Yamaguchi	050313	6471
23850 7590 06/24/2009 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W.			EXAMINER	
			BODAWALA, DIMPLE N	
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			1791	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)		
	10/539,884	YAMAGUCHI ET AL.		
Office Action Summary	Examiner	Art Unit		
	DIMPLE N. BODAWALA	1791		
The MAILING DATE of this communication ap Period for Reply	ppears on the cover sheet with the o	correspondence address		
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING DESTRICTION OF THE MAILING DESTRUCTION OF THE MAILING	DATE OF THIS COMMUNICATION  .136(a). In no event, however, may a reply be tired will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONE	N. mely filed the mailing date of this communication. ED (35 U.S.C. § 133).		
Status				
Responsive to communication(s) filed on <u>08 A</u> This action is <b>FINAL</b> . 2b) ☑ This action is application is in condition for allowed closed in accordance with the practice under	is action is non-final. ance except for formal matters, pro			
Disposition of Claims				
4)  Claim(s) 1,9,13,19 and 21-36 is/are pending i 4a) Of the above claim(s) is/are withdra 5)  Claim(s) is/are allowed. 6)  Claim(s) 1,9,13,19 and 21-36 is/are rejected. 7)  Claim(s) is/are objected to. 8)  Claim(s) are subject to restriction and/	awn from consideration.			
Application Papers				
9) The specification is objected to by the Examin 10) The drawing(s) filed on is/are: a) ac Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the E	cepted or b) objected to by the drawing(s) be held in abeyance. Se ction is required if the drawing(s) is ob	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).		
Priority under 35 U.S.C. § 119				
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>				
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date	4)  Interview Summary Paper No(s)/Mail D 5)  Notice of Informal F 6)  Other:	ate		

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#### **DETAILED ACTION**

### Response to Amendment

- 1. The declaration under 37 CFR 1.132 filed on 4/8/2009 is insufficient to overcome the rejection of claim 1 based upon *a specific reference applied under 35 U.S.C. 103* as set forth in the last Office action because:
  - ➤ Specific reference cited on declaration under 37 CFR 1.132 contains typographical error such as JP 2002-3202795, instead of JP 2002-302795. The declaration is defective for this reason.
  - ▶ Declaration under 37 CFR 1.132 contains the method of the comparative tests for horizontal tensions strength (See pages 2-4 of declaration); evaluation of the horizontal tension strength (See pages 5 of declaration); and evaluation of vertical tension strength (See pages 8 of declaration). Thus, Declaration under 37 CFR 1.132, filed on 4/8/2009 discussed the horizontal tension strength and vertical tension strength, which can not overcome the rejection of the claim 1 because claim 1 of the instant application cites "composite having a tensile strength from between 20Kgf to at least 50Kgf", does not cite composite having vertical tensile strength and/or horizontal tensile strength as discussed in Declaration.

## Response to Arguments

- 2. Applicant argues that the phrase in claim 1"about 85% or more of which" has been deleted making the rejection of claims under 35 USC 112, 1<sup>st</sup> paragraph. Applicant's argument is fully considered and therefore rejection of claims under 35 USC 112, 1<sup>st</sup> paragraph has been withdrawn in view of the amendment of claim.
- 3. Applicant's following arguments filed on 4/8/2009 have been fully considered but they are not persuasive.

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4. Applicant argues that the structure of the anodic oxidation coating of claim 1 comprises the diameter of the pores of the anodic oxidation coating made in aluminum material is limited to the range of 25nm-about 90 nm, and the depth of the pored is limited to the range of about 1-1.5  $\mu$ m, thus the structure of claim 1 of the instant application is different from that of anodic oxide film of the prior art Minoda (JP 2002-302795).

- 5. In response to applicant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Minoda et al. discloses an anodic oxidation film comprising pores having diameter 50-200 nm (See paragraph # 8 of the translation), wherein thickness of the anodic oxide film is 30-400, more preferably 100-300 nm (See paragraph # 16). Thus, the structure of the Minoda is capable to have all claimed limitation of the structure of the instant application.
- 6. Applicant further argues that according to the Minoda invention disclosed in JP'795, it is essential to form the fine pores within the holes for obtaining an excellent anchor effect. Whereas, according to present claim 1, it is not necessary to form such fine pores within the pores, and excellent anchor effect can be obtained by the fine pores alone having the diameter of 25nm-90nm and depth about 1-1.5 μm.
- 7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the Minoda invention disclosed in JP'795, it is essential to form the fine pores within the holes for obtaining an excellent anchor effect. Whereas, according to present claim 1, it is not necessary to form such fine pores within the pores, and excellent anchor effect can be obtained by the fine pores alone having the diameter of 25nm-90nm and depth about 1-

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1.5 μm) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case, the instant claim does not cite that pores by itself or not necessary to form fine pores within the pores, or fine pores by itself obtained excellent anchor effect.

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- 8. Applicant further argues that in addition, the vertical and horizontal tensile strength of the component having the above-defined fine pores formed in the anodic oxidation coating as cited in the anodic oxidation coating in claim 1 are superior to those of the components having the above defined holes and fine pores within the holes as cited in prior art, JP'795. as explained by the enclosed inventor's declaration. The declaration alone, comparing Minoda and the claimed invention, proves the structural differences, thus, making a prima facie obviousness rejection fail.
- 9. In response to applicant's argument that the vertical and horizontal tensile strength of the component, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Furthermore, instant claim does not define tensile strength as the vertical and horizontal tensile strength of the component. Applicant's argument regarding the Declaration has been fully considered but not found persuasive because of submission of ineffective Declaration as discussed above. Therefore, rejection has been maintained.
- 10. Applicant further argues that in combination rejection of claims over Iwasaki et al. (US 2002/0109134) in view of Minoda (JP 2002-302795), wherein Iwasaki discloses a nanostructure having a plurality of kinds of pores, but does not disclose the composite comprising the anodic oxidation coating of aluminum material and the synthetic resin film intruded in the pores of the anodic oxidation coating as cited in claim 1.

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- 11. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, primary reference discloses an anodic oxidation coating with pores, but fails to teach or suggest intruding the synthetic resin within the pores in order to form composite article, Wherein such lacking of limitation within the primary art is modified by providing teaching of secondary art, which teaches to introduce resin material within the pores of the anodic film.
- 12. Applicant further argues that Iwasaki discloses a plurality of kinds of pores with two different diameters at predetermined positions in the anodic porous alumina, which shows the structure of anodic oxidation coating of the invention is clearly different from the nanostructure of the Iwasaki.
- 13. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Iwasaki discloses a plurality of kinds of pores with two different diameters at predetermined positions in the anodic porous alumina, which shows the structure of anodic oxidation coating of the invention is clearly different from the nanostructure of the Iwasaki) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case, the

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claims of the instant application do not cite that the oxidation film comprises pores which do not have different diameter.

- 14. Applicant further argues that Iwasaki fails to teach or suggest step of filling a fused synthetic resin in the pores or applying a fused synthetic resin to the surface of the anodic porous alumina. Thus, the critical component for obtaining a strong tensile strength of a synthetic resin intruded in the pores on the anodic oxidation coating as cited in claim 1 can not be suggested or taught by Iwasaki. Minoda is overcome by the Declaration, thus, the rejection fails.
- 15. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, primary reference discloses an anodic oxidation coating with pores, but fails to teach or suggest intruding the synthetic resin within the pores in order to form composite article, Wherein such lacking of limitation within the primary art is modified by providing teaching of secondary art, which teaches to introduce resin material within the pores of the anodic film. Applicant's argument regarding the Declaration has been fully considered but not found persuasive because of submission of ineffective Declaration as discussed above. Therefore, rejection has been maintained.

## Claim Rejections - 35 USC § 103

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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# 17. Claims 1, 9, 13, 19 and 21-36 are rejected under 35 U.S.C. 103(a) as being obvious over Minoda (JP 2002-302795; which is cited by Applicant on PTOL-1449).

- 18. As to claim 1, Minoda discloses an invention related to surface treated aluminum material wherein aluminum or aluminum alloy surface which is coated with anodic oxide film, wherein such film is involved to form fine pores (See paragraph # 6-7 of the translation), wherein pores about 85% or more (See figures 1-2) having diameters 50-200 nm (See paragraph # 8 of the translation), wherein thickness of the anodic oxide film is 30-400, more preferably 100-300 nm (See paragraph # 16). It further teaches that the coating having depth about 60-100 nm (See paragraph # 17). It further teaches that the worked aluminum surface is laminated with resin film, such that the resin film can be raised notably within the pores, and, thus improves the tensile strength (See paragraphs # 2, 7, 14, 20-21, 28, 34, 37-38). However, the thickness of the coating is in desired range as cited in the claimed invention, therefore, the tensile strength also anticipates by the references based on calculation of the coating thickness, wherein varying thickness or depth of the coating within the range disclosed in order to optimize tensile strength would be an obvious variation to one of ordinary skill in the art.
- 19. As to claim 19, Minoda teaches that the a composite is produced by a process, which comprises plate made of 5052 aluminum material having thickness 0.3 mm and able to define work surface of the aluminum material is treated with phosphoric acid, in order to form porous anodic oxidation coating film on the work surface having fine pores. After this step, the oxidation coating film is laminated with molten resin which intruded in the holes of a porous oxidation coating layer (See example).
- 20. Here claims 9, 13, 19 and 21-36 are claimed limitation of product produced by different method, while claim 1 is claimed product. Furthermore, claim 1 recites the process limitation for producing the product such as "injected synthetic resin". As we know that the product can be manufactured by different processes, unless it is Applicant's burden to prove that an unobviousness difference exists. With respect to the claim

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recitation regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claim. Note that determination of patentability is based on the product apparatus itself, *In re Brown, 173 USPQ 685,688*, and the patentability of a product does not depend on its method of production, *In re Pilkington, 162 USPQ 145, 147; In re Thorpe, 227 USPQ 964 (CAFC 1985)*. Note that it is Applicant's burden to prove that an unobvious difference exists, *In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983)*, and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, *Ex parte Skinner, 2 USPQ2d 1788, See MPEP 2113*. It the prior art discloses different process to produce product invention with similar limitation of the claimed invention; therefore, the prior art anticipates or makes obvious the claimed invention.

- 21. Thus, Minoda suggests the tensile test for measuring tensile strength or adhesion of the worked aluminum material, but fails to provide range of the tensile strength.
- 22. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Minoda by providing range of tensile strength which is optimized from thickness or depth of the coating for forming stable and fine nanostructure with desired dimension and shape of pores, which is widely used for electronic and optical devices. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02. Claimed range and the prior art range of composition are close enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPO 773 (Fed. Cir. 1985).

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23. Claims 1, 9, 13, 19 and 21-36 are rejected under 35 U.S.C. 103(a) as being obvious over Iwasaki et al. (US 2002/0109134) in view of Minoda (JP 2002-302795; which is cited by Applicant on PTOL-1449).

- 24. Iwasaki et al. discloses nanostructure which comprises aluminum material was deposited on substrate to prepare work piece (1) (See example 4), wherein work piece having anodic oxidation coating (4) for forming innumerable pores (3,5) about 85% or more (See figures 2A-2D; paragraphs # 47-48), wherein pores having depths are in the range of 10nm to 100μm (See paragraph # 52) and diameter is about 25 nm and 40 nm (See example-2). It further teaches that the depth of pores can be controlled by controlling thickness of coating (See paragraph # 52), thus, inherently suggests that the coating having depth in a range as cited in claim.
- 25. Iwasaki et al. discloses all claimed structural limitations as discussed above. It further discloses anodic oxidation coating comprising innumerable pores, but fails to teach or suggest synthetic resin material intruded in the pores.
- 26. As to claim 1, Minoda discloses an invention related to surface treated aluminum material which has an anodic oxidation film (2) having plurality of fine pores (5, 4) (See abstracts), wherein pore structures on the work surface of aluminum are adapted to receive resin material for improving adhesion (See paragraph # 2, 8, 14-15 of the translation), thus, aluminum work surface having anodic coating for forming pores, which is laminated by resin film, and then such work surface is configured for tensile test for estimating evaluation of adhesion (See paragraph #34). Thus, Minoda suggests the tensile test for measuring tensile strength or adhesion of the worked aluminum material, but fails to provide range of the tensile strength. However, the thickness of the coating is in desired range as cited in the claimed invention, therefore, the tensile strength also anticipates by the references based on calculation of the coating thickness, wherein varying thickness or depth of the coating within the range disclosed in order to optimize tensile strength would be an obvious variation to one of ordinary skill in the art.

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- 27. As to claim 19, Minoda teaches that the a composite is produced by a process, which comprises plate made of 5052 aluminum material having thickness 0.3 mm and able to define work surface of the aluminum material is treated with phosphoric acid, in order to form porous anodic oxidation coating film on the work surface having fine pores. After this step, the oxidation coating film is laminated with molten resin which intruded in the holes of a porous oxidation coating layer (See example).
- Here claims 9, 13, 19 and 21-36 are claimed limitation of product produced by 28. different method, while claim 1 is claimed product. Furthermore, claim 1 recites the process limitation for producing the product such as "injected synthetic resin". As we know that the product can be manufactured by different processes, unless it is Applicant's burden to prove that an unobviousness difference exists. With respect to the claim recitation regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claim. Note that determination of patentability is based on the product apparatus itself, *In* re Brown, 173 USPO 685,688, and the patentability of a product does not depend on its method of production, In re Pilkington, 162 USPQ 145, 147; In re Thorpe, 227 USPQ 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, Ex parte Skinner, 2 USPQ2d 1788, See MPEP 2113. It the prior art discloses different process to produce product invention with similar limitation of the claimed invention; therefore, the prior art anticipates or makes obvious the claimed invention.
- 29. So, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Iwasaki et al. by intruding synthetic resin material within pores of the worked aluminum surface as taught by Minoda because such feature is involved to form stable and fine nanostructure with desired dimension and

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shape of pores within the worked aluminum surface, and, thus, able to improve tensile strength or adhesion of the worked aluminum material. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112-2112.02. Claimed range and the prior art range of composition are closed enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

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- 30. Claims 1, 9, 13, 19 and 21-36 are rejected under 35 U.S.C. 103(a) as being obvious over Burnham (US 2,647,079).
- 31. As to claim 1, Burnham discloses an invention which comprises base electrode as working surface, wherein base is composed of metal material such as aluminum, titanium, tantalum (See col.2 lines 20-23), wherein working surface of the base includes an anodic oxidation coating comprising innumerable pores (See figure 1; col.2 lines 23-40). It further teaches that oxide coating film is subjected to a treatment with a suspension of synthetic resin such as polytetrahalothylene resin particles, a copolymer of a tetrahalothylene with another polymerizable material, polytetrafluorethylene (PTFE), polytrifluorochloroethylene, polytetrachloroethylene, and the like, is deposited in the pores of the oxide film (See col.2 lines 14-20; 45-50), wherein such structure of the invention is capable to exhibit the article with desired properties such as durable and tough. It further teaches that the thickness of the aluminum oxide film between about 1.0 micron and about 400 microns (See col.1 lines 47-54).
- 32. As to claim 19, Burnham discloses composite article which is produced by process, wherein process comprises a plate or rod made of metal material such as aluminum, titanium, tantalum (See col.2 lines 20-23), wherein working surface of aluminum material is treated with selected electrolytes such as oxalic acid, citric acid,

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boric acid, chromic acid, and the like at high temperature, in order to form porous anodic oxidation coating film on the surface of the aluminum material, wherein such oxidation coating film is capable to define the fine pores (See figure 1; col.2 lines 20-40). Then, prior to drying of oxide film, the resin particles deposited in the pores of the oxide film, wherein synthetic resin such as polytetrahalothylene resin particles, a copolymer of a tetrahalothylene with another polymerizable material, polytetrafluorethylene (PTFE), polytrifluorochloroethylene, polytetrachloroethylene, and the like (See col.2 lines 14-20; 45-50), wherein the particles are molted at high temperature (See col.3 lines 11-15; col.3 line 51 through col.4 line 7).

33. Here claims 9, 13, 19 and 21-36 are claimed limitation of product produced by different method, while claim 1 is claimed product. Furthermore, claim 1 recites the process limitation for producing the product such as "injected synthetic resin". As we know that the product can be manufactured by different processes, unless it is Applicant's burden to prove that an unobviousness difference exists. With respect to the claim recitation regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claim. Note that determination of patentability is based on the product apparatus itself, In re Brown, 173 USPQ 685,688, and the patentability of a product does not depend on its method of production, In re Pilkington, 162 USPO 145, 147; In re Thorpe, 227 USPO 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, In re Marosi, 218 USPO 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, Ex parte Skinner, 2 USPQ2d 1788, See MPEP 2113. It the prior art discloses different process to produce product invention with similar limitation of the claimed invention; therefore, the prior art anticipates or makes obvious the claimed invention.

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34. Burnham discloses all claimed limitations as discussed above. It further discloses oxide film with innumerable pores, but fails to teach or suggest diameter of pore. It further fails to show tensile strength of the composite article.

- 35. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Burnham by optimizing the diameter range of fine pores of the oxide film, because such feature is capable to indicate the composition of the synthetic resin within the holes, in order to exhibit the composite structure with desired property such as durability of pores within oxide coating of the article. It is not necessary that the prior art suggests expressly or in so many words the changes or possible improvements the inventor made but that the knowledge is clearly present. *In re Sernaker*, 217 USPQ 1 (Fed. Cir. 1983).
- 36. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Burnham by providing a range of tensile strength, wherein such property is optimized from thickness or depth of the coating, in order to form stable and fine structure with desired dimension and features such as shape of pores, which is widely used for electronic and optical devices. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02. Claimed range and the prior art range of composition are close enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is

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(571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dimple N Bodawala Examiner Art Unit 1791

/D. N. B./ Examiner, Art Unit 1791

/Philip C Tucker/ Supervisory Patent Examiner, Art Unit 1791